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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/591,531

06/09/2000

Lawrence Bernard Kool

RD-27,817

3236

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7590

08/14/2002

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EXAMINER

ANYA, IGWE U

ART UNIT

PAPER NUMBER

2825

DATE MAILED: 08/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/591,531

Applicant(s)

KOOL ET AL.

Examiner

Igwe U. Anya

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23, 34-37 and 42-48 is/are rejected.
- 7) ☒ Claim(s) 24-33 and 38-41 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 5, 6, 9, 10, 12, 13, 15, 17, 18, 19, 22, 23, 34, and 36 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Nagaei et al. (Abstract of JP Patent Number 56096083).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagaei et al. (JP Patent Number 56096083) in view of O'Brien (US Patent Number 5817182).
3. Nagaei et al. teach the features previously outlined, but lack the step of forming the fluosilicic acid in situ by reacting silicon dioxide with hydrogen fluoride.
4. However O'Brien teaches the step of forming the fluosilicic acid in situ by reacting silicon dioxide with hydrogen fluoride (column 2 lines 47 – 55).

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5. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of O'Brien into the method of Nagaei et al. to provide hydrofluosilicic acid in situ. Provision for adjustability where needed involves ordinary skill in the art.

6. Claims 3, 4, 11, 14, 16, 20, 21, 35, 37, 42 to 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagaei et al. (JP Patent Number 56096083) in view of Matsukawa (US Patent Number 5962145).

7. Nagaei et al. teach the features previously outlined, but lack the step of:

the concentration of the acid being between 0.05 – 3.5M;

the concentration of the additional acid being between 0.1 – 20M;

the additional acid being a mineral acid having a pH of less than about 3.5 in pure water; and

immersing the substrate in bath in the range of about 10 minutes to about 72 hours.

3. However, Matsukawa teaches the steps of:

the concentration of the acid and the additional acid (column 3 lines 37 – 65);

the additional acid being a mineral acid having a pH of less than about 3.5 in pure water, and the treatment time (column 6 table 1);

8. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Matsukawa into the Nagaei et al. reference to etch a coating. Discovering an optimum value for a result effective

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variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

9. Claims 24 – 33, and 38 to 41 are objected to as being dependent upon a rejected claim, but would be allowable if rewritten in independent form.

10. Prior art considered but not used in the rejections include Lada et al. (US Patent Number 4339282), Kircher et al. (US Patent Number 6036995), and Jaworowski et al. (US Patent Number 6176999)

Remarks

11. The examiner has reviewed prior art in light of applicant's comments and finds it persuasive as to the reading of prior art. However, the examiner has discovered a new reference, which can be used as prior for rejection of some of the claims. This office action is a ***Non-Final Rejection*** of the claims.

Contact Information

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Igwe U. Anya whose telephone number is (703) 308-3549. The examiner can normally be reached on M - F 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on (703) 308-1323. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Igwe U. Anya
Examiner
Art Unit 2825

IA
August 12, 2002


CARDA EVERHART
PRIMARY EXAMINER